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THE ARCHAEOLOGICAL HINTERLANDS OF MAHASTHANGARH OBSERVATIONS AND POTENTIAL FOR FUTURE RESEARCH*

Monica L. SMITH

Introduction

Even in its earliest period of occupation, the life of Mahasthangarh extended beyond its walls to the surrounding hinterlands. Today, reconnaissance in the region around the site reveals a landscape that has been heavily worked and reworked for centuries by human hands, in addition to changes wrought by natural events such as earthquakes and floods. In this paper, observations from a preliminary archaeological reconnaissance in 1998 and 1999 are used to model the relationships between the city and its hinterland from the Early Historic through the medieval Islamic periods.

Methodology

The ancient urban center and hinterlands of Mahasthangarh have attracted attention since the visit of Alexander Cunningham in 1879, when he identified the archaeological remains with the historically-known city of Pundravarddhana.[1] Information about the surrounding area was compiled into a map by P.C. Sen in 1929, and remains to this day the only comprehensive archaeological map of the Mahasthangarh region.[2] Other publications have described sites in the surrounding region, notably the report on archaeological survey of Bogra District prepared by Ali and Bhattacharjee, as well as the site-specific volume on Mahasthangarh by Ahmed.[3] The reconciliation of these descriptions (generally consisting of site sizes and relative locations) with Sen's map is often difficult, as there are numerous cases in which the description does not correspond to the locations of similarly-named sites on the map.

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1. A. CUNNINGHAM, *Report from a tour in Bihar and Bengal in 1879-80. From Patna to Sunargaong*, Archaeological Survey of India Reports volume 15, Calcutta, 1882. M. ALI and S.B. BHATTACHARJEE, *Archaeological Survey Report Bogra District*, Directorate of Archaeology and Museums, Dhaka 1986, point out that there were other early European visitors who described the monuments of the region, including Buchanan Hamilton in 1808. However, the explorations undertaken by Cunningham can be described as the first systematic and analytic assessment of the region's archaeological remains.
2. P.C. SEN, *Mahasthangarh and its environs*, Rajshahi, 1929. In 1998, I was shown a new topographic map of the area to the southwest of the fortification wall of Mahasthangarh that was being prepared in conjunction with that year's excavations by the Bangladesh Directorate of Archaeology at the site of Godai Bari (located about one kilometer southwest of the southwest corner of the fortification wall of Mahasthangarh).
3. M. ALI and S.B. BHATTACHARJEE, *Archaeological survey report Bogra District*, Directorate of Archaeology and Museums, Dhaka, 1986; N. AHMED, *Mahasthan: A preliminary report of the recent archaeological excavations at Mahasthangarh*, Department of Archaeology and Museums, Dhaka. There is also a recent brief description of some sites published by S.S.M. RAHMAN, in the *Journal of Bengal Art* vol. 3, 1998.

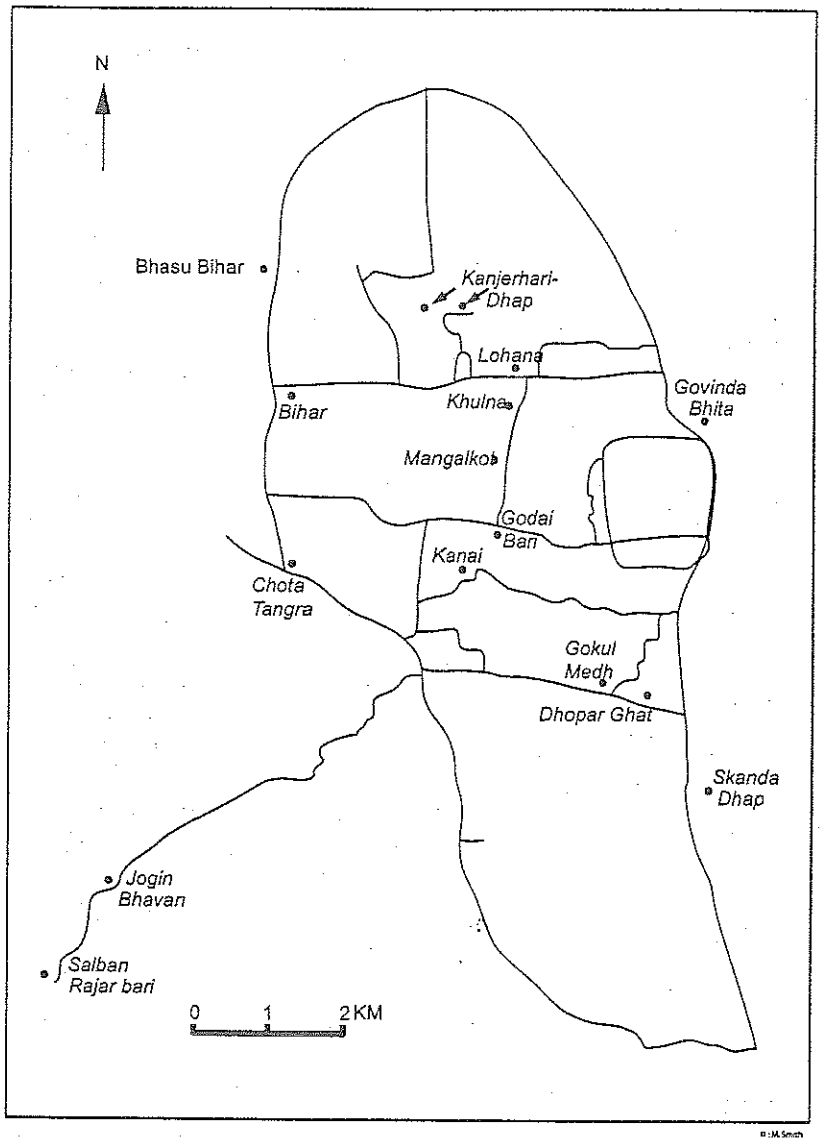

Figure 1. Paths taken during 1998-99 archaeological reconnaissance of Mahasthangarh's hinterlands. Large sites mentioned in text are indicated.

The reconciliation of these written and cartographic sources with actual archaeological vestiges is also often difficult. Many of the smaller mounds described in these sources have since disappeared as farmers maximize the extent of their agricultural lands by removing archaeological mounds (a phenomenon seen throughout northwestern Bangladesh). To gain a better understanding of the archaeological resources of the region surrounding Mahasthangarh, a reconnaissance was carried out in 1998 and 1999 to confirm the location of archaeological remains in the hinterlands of the fortified urban center (*fig. 1*).

This project can be described as an adjunct to the more comprehensive geophysical investigation carried out by Christine Jacqueminet, a report of which is found elsewhere in this volume.

The area of the present survey was bounded by the presence of roads as noted on Sen's map, the placement of which has not varied considerably since 1929. An effort was made to visit all the principal mounds noted by Sen; more importantly, the landscape of the region was scrutinized for other potential archaeological vestiges that may indicate much smaller sites. The survey was carried out principally by foot or cycle along the roads that traverse the regions to the north, west and south of the fortification walls of Mahasthangarh.[4] This method of survey is effective in the local environment for several reasons. First, even in the dry season the majority of the landscape is covered in wet rice fields with near-constant irrigation that makes pedestrian transect survey impossible.[5] Secondly, seasonal flooding and environmental effects have combined (in a process that is not yet well-understood) to greatly limit artifact visibility on low-lying areas. Artifacts can generally only be seen on elevated surfaces, and even then the quantity of surface materials is quite small compared to subsurface remains. In many cases, elevated areas are only confirmed to contain structural elements when such structures are seen in pits dug by villagers for the recovery of bricks and building material.

The location and condition of archaeological sites

Any assessment of the archaeological landscape of the Mahasthangarh region must be prefaced by an understanding of the region's extremely high rate of population growth in the twentieth century. The modern rate of population growth is not unique to the region of Mahasthangarh, however, as the entire country has experienced an exploding demographic in the past century (from a population of about 27 million in the late 1800s to 127 million today).[6] An indication of the relative population density in the survey area is indicated in *fig. 2*.

Population growth in the region of Mahasthangarh has had two specific and deleterious effects on archaeological remains: the removal of some sites and the covering of others with modern habitation. Sites that consist of elevated areas with structures, *i.e.* mounds, are subject to destruction since by removing the mound, villagers can simultaneously recover valuable building materials from buried structures and create level ground for agriculture. Since mechanical equipment is not yet utilized in the region for digging and construction, the removal

4. This type of linear survey is far from ideal in terms of assessing the complete archaeological resources of a region; the advantage, however, is that a broad (if judgmental) cross-section of the archaeological landscape is recovered. The realities of road-based surveys as means of producing cost-effective outlines for future research has been discussed, for example, by J. BOWER, " A Survey of Surveys: Aspects of Surface Archaeology in Sub-Saharan Africa ", *The African Archaeological Review*, 4, 1986, p. 21-40.

5. For surface-survey methodologies utilized in other areas where wet-rice agriculture is dominant, see, e.g., Karen MUDAR, *Prehistoric and Early Historic Settlement on the Central Plain: Analysis of Archaeological Survey in Lopburi Province, Thailand*, Ph.D. dissertation, Department of Anthropology, University of Michigan, 1993; David J. WELCH, *Adaptation to Environmental Unpredictability: Intensive Agriculture and Regional Exchange at Late Prehistoric Centers in the Phimai Region, Thailand*. Ph.D. dissertation, Department of Anthropology, University of Hawaii, 1985. These methods of ground-checking are preferable to the assessment of archaeological sites from aerial photography alone; see E. MOORE, *Moated Sites in Early North East Thailand*, British Archaeological Reports, International Series 400, Oxford, 1988.

6. A. ADLAKHA, *Population trends Bangladesh*, Center for International Research, Washington D.C., 1993; A. AHMAD, *Agricultural stagnation under population pressure: The case of Bangladesh*, Vikras Publishing, New Delhi, 1984.

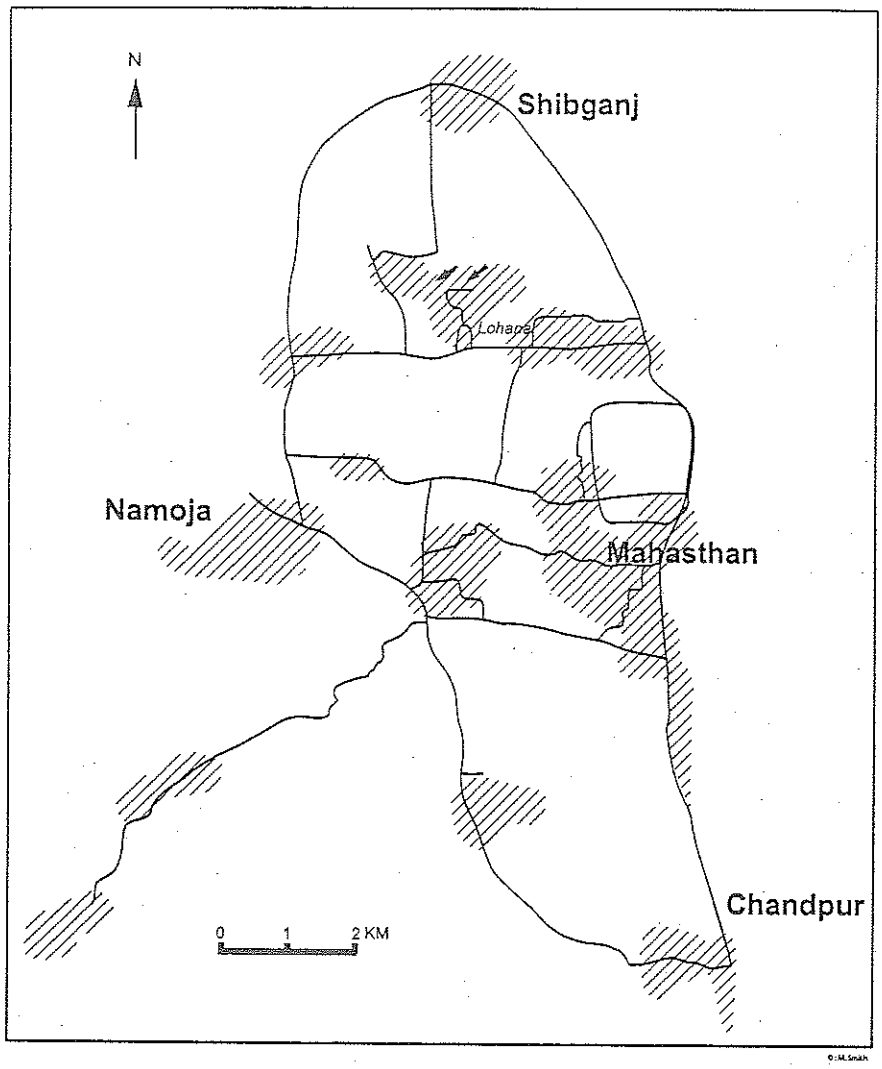

Figure 2. Areas of modern habitation in the Mahasthangarh hinterlands.

of sites is undertaken by hand, although the process can still be extremely rapid. Sites can also be subjected to superimposed human habitation, as the mounds provide elevated ground that is particularly desirable when it is above the surrounding flooded areas during the annual monsoon. In practice, most large archaeological sites suffer from a combination of both the factors, as materials are recycled within meters of where they are dug out and restacked into new dwellings made of *pisé* or re-used baked brick.

Population growth has also affected the natural environment of Mahasthangarh's hinterland. In 1879, Cunningham noted that the region to the northwest of Mahasthangarh was thickly covered with vegetation and trees. Today, the landscape retains its lush character and capacity for luxuriant growth. However, with the current demand for land and fuel, vegetation is now usually found only in villages and around smaller clusters of houses while the majority of the surrounding area is used for crops (principally rice, potatoes, cauliflower, sweet potatoes, wheat and betel).[7]

7. For a detailed analysis of soils and vegetation, see H. BRAMMER, *The Geography of the Soils of Bangladesh*, University Press Limited, Dhaka, 1996.

Mahasthangarh's relationship to its hinterland

Archaeological evidence from the current excavations within the city (in the Eastern Rampart) reveals a rich corpus of material culture. Through the analysis of these artifacts, it is possible to assess the percentage of items that were manufactured locally or were imported. Some items, particularly those of metal and stone, must have been imported to the region as either raw materials or finished products since neither metal nor stone are found naturally in the vicinity of Mahasthangarh. However, the vast majority of artifacts from the site appear to have been locally-made starting in the earliest periods of the site's occupation.

Studies of Early Historic period finewares such as Northern Black Polished Ware (NBPW) by S. Elaigne have shown that while the forms represented at Mahasthangarh have close parallels elsewhere in the Ganges valley, the fabrics and style of these vessels indicate a local production.[8] The composition of common wares, as studied by D. Allios and V. Serdon, also indicate that these wares were produced locally.[9] This pattern of local production of both finewares and coarse or common wares has been noted elsewhere in the subcontinent for this period, indicating the robust nature of regional economic patterns.[10] Pottery production, which is dependent upon the availability of suitable clays as well as other resources such as water and fuel, was unlikely to have been carried out in Mahasthangarh's city center.[11] Other important resources were available only outside the city walls, including agricultural products and forest products such as timber, wild animals, medicinal plants and famine foods.[12]

While the city relied on its extramural hinterland for finished products and raw materials, the configuration of this relationship appears to have changed over time. The formal boundary of the ancient city of Mahasthangarh, consisting of an earthen rampart topped by a series of baked-brick fortification walls, remained essentially unchanged in shape throughout all occupation periods. The location of sites around the urban core however suggests that there were significant shifts in the location of population in the hinterlands of Mahasthangarh over time. Although chronological indicators such as ceramics are generally sparse on the surface of these sites, the presence of some datable ceramics as well as the distribution of different types of sites permits a suggestion of the changes in population trends over time. These trends are summarized in *fig. 3*, and discussed below.

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8. See Sandrine ELAIGNE, *Étude des céramiques fines de Mahasthangarh, Bangladesh, aux époques Maurya et Shunga dans des perspectives techniques et culturelles*, University Lumière Lyon 2, 1996 (unpublished M.Phil).
9. See their paper elsewhere in this volume.
10. For example, A.N. Singh used emission spectrography and X-ray analysis [author's note: probably X-ray diffraction] to compare the composition of different ware types at the fortified site of Satanikota in Andhra Pradesh; the analysis showed that the wares were exactly the same in mineralogy and structure, supporting an inference of local production. See the report of Satanikota in *Indian Archaeology, A Review 1978-79*, p. 35.
11. The location of pottery-production centers may of course have changed through time. At the lowest levels of the excavation within the Eastern Rampart area, there was an extraction pit that may have been made by the earliest inhabitants to recover clay suitable for pottery-production; see J.-F. SALLES, " North Bengal in the Mauryan and post-Mauryan periods: Reflections on the Ancient History of Mahasthan ", *Journal of Bengal Art*, vol. 3, 1998 (Dhaka), p. 187-197.
12. For the importance of these non-agricultural products in the Early Historic period, see chapter 10 of the dissertation by M.L. SMITH, *Strong economies, weak polities: The archaeology of the Early Historic period in central India*, Department of Anthropology, University of Michigan, 1997.

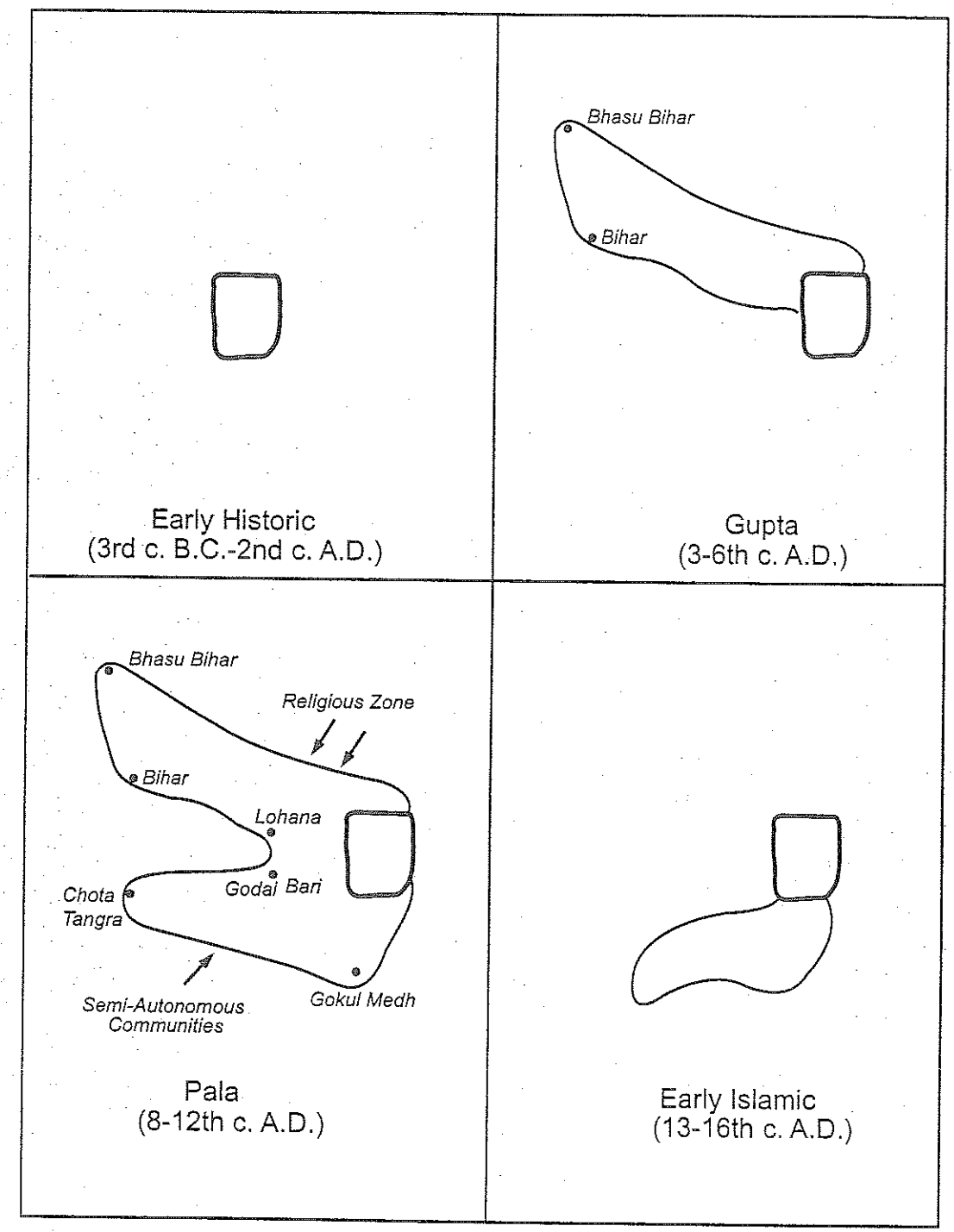

Figure 3. Fortified site of Mahasthangarh, with hypothesized settlement pattern in the site's hinterland through time.

Phase I: Early Historic (3rd century B.C. to 2nd century A.D.)

No archaeological remains prior to the late fourth century B.C. have ever been recovered from the region of Mahasthangarh, which suggests that the initial population selected this area and quickly built up the site, possibly as a trading center given its favorable location on the banks of the Karatoya river.[13] The excavations at the Eastern Rampart site since 1993 have provided stratigraphic information about successive phases of the site. The material record of the earliest periods in this excavation indicate that the site was wealthy even at its inception, and the residents of relatively mundane structures made use of items such as bronze mirrors and bowls, stone beads, and coins.

The simultaneous development of labor-intensive landscape modifications (*i.e.* rampart and subsequent fortification wall, artificial ponds, and probably, rice paddies and terraces), throughout the area of Mahasthangarh presupposes a large population even in this initial period. It also presupposes a relatively high level of agricultural fertility and sophisticated agricultural practices, because during the dry season labor-hours would have been expended on construction projects as well as agriculture (due to the monsoon, there cannot be a seasonal rotation of labor between different types of outdoor productive activities). There are no archaeological or historical documents that suggest that there was settlement outside of the fortified urban core in the Early Historic period, although 3rd c. B.C. remains were reported by N. Ahmed at the site of Govinda Bhita, just a hundred meters North of the rampart.

Phase II: Gupta (3-6th centuries A.D.)

The identifiable archaeological vestiges from this period in the survey material are exceedingly rare, and the suggestion of a settlement pattern around Mahasthangarh is mostly drawn from literary accounts and previous excavations in the area. In part the lack of Gupta-period material among the survey data may be the result of later-period occupations that have obscured any remains from the Gupta period and earlier.

In the region outside of the walls of Mahasthangarh, excavated remains from this phase include later Gupta-era sculptures from the site of Mangalkot (see *fig. 1* for location).[14] Early-phase Gupta sculptures were reported to have been recovered from areas to the south of Mahasthangarh, at the site of Balai Dhap.[15] Also reported from this region were two Gupta coins from the village of Bamanpara, and a bronze image of the fifth century A.D. from the adjacent village of Saralpur.[16] Aside from these finds, sites with Gupta-period structures include Govinda Bhita, located immediately outside of the rampart's northeast corner.[17]

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13. For a discussion of the early settlement of this region, see J.-F. SALLES, " North Bengal... ", in *JBA*, 3, 1998.
14. The remains from a salvage excavation in 1981 are described with some photographs in ALI and BHATTACHARJEE, 1986, *op. cit.*, p. 27, where the authors explicitely refer to the later Gupta period. Although they indicate that " a thorough and scientific excavation at the site is likely to be rewarding ", the site has already been rather thoroughly excavated and apart from the preserved excavation trenches there is only a little of the site that remains as a small " island " between cultivated fields. A Gupta and post-Gupta period is assigned to the terracottas from Mangalkot by M.ALI, " Some important antiquities from Mangalkot Mound (Bogra) ", *Journal of Bengal Art*, vol. 1, 1996 (Dhaka), p. 103-108.
15. AHMED, *op. cit.*, p. 56.
16. The Bamanpara coins were identified by Rajendralala Mitra as a coin of Chandra Gupta and one of Mahendra Gupta; see J. BEVERIDGE, " The antiquities of Bagura (Bogra) ", *Journal of the Asiatic Society of Bengal*, 47(1), 1878, p. 88-95. Information on the bronze image from Saralpur is cited by ALI and BHATTACHARJEE *op. cit*, p. 30, from the *Annual Report of the Varendra Research Society* 1926-27 and 1927-28.

The historical texts of this era indicate that there should be more Gupta-period remains from the region of Mahasthangarh than are currently known. The most famous reference to the post-Gupta period consists in a description by the seventh-century Chinese pilgrim Hiuen Tsang. He wrote that in the country of *Pun-na-fa-tan-na* (Pundravarddhana), "there are about twenty *sangharamas* [monasteries] with some 3000 priests...[and] there are some hundred Deva temples, where sectaries of different schools congregate."[18] Hiuen Tsang also describes a monastery called *Po-Shi-Po* twenty *li* (about 6.5 kilometers) to the west of the capital, where there were about 700 monks who studied the *Mahayana*.[19] There are two sites that correspond to the general location described by Hiuen Tsang; some place the site at Bihar, and some at Bhasu Bihar.[20]

Both Bihar and Bhasu Bihar have been excavated. The excavations at Bhasu Bihar stopped at levels corresponding to the 10-11th centuries, although there is a potential for earlier remains as the excavations did not reach virgin soil.[21] The excavations at Bihar revealed structures in an area measuring about 0.75 hectares on the eastern side of a mound that still measures 3.5 hectares, and was likely to have been larger than this prior to the encroachment of fields and houses in the vicinity. The excavations at Bihar, conducted in 1979-83, produced the outline of what appears to be a single large structure measuring 57 x 61 meters with a number of rooms identified as monastic cells.[22] The excavations at Bihar and Bhasu Bihar indicate that the substantial constructions of this era outside the walls of Mahasthangarh appear to be religious sites related to Buddhist practice.

The current excavations of the Eastern Rampart area show that the levels corresponding to the Gupta period are relatively disturbed, and that the site does not appear to have been as wealthy as in the Early Historic period.[23] One could speculate that this may be the result of economic changes in greater Bengal, in which trade activities shifted to the south. The history of Bengal in this time period indicates a greater proportion of Gupta-era activity in the south, near the confluence of the Ganges and the Meghna rivers.[24]

17. AHMED, *op. cit.*, p. 28-30.
18. S. BEAL, translator, *Si-Yu-Ki, Buddhist Records of the Western World*, London 1968 [1884], p. 195.
19. BEAL, *op. cit.*, p. 195.
20. CUNNINGHAM, *op. cit.*, placed the site at Bihar and the associated stupa at the nearby site of Bhasu Bihar. S.M. ALAM, " Historicity of Po-Shi-Po Vihara: An inquiry into the antiquity of Bihar Dhap, District Bogra, Bangladesh ", *Bulletin of the Deccan College Post-Graduate and Research Institute*, 50, 1990, p. 127-134, also suggests that the site of Bihar is more likely to be the location of the large monastery based on recent excavations there. Given the proximity of the two sites, it may be more appropriate to see Bihar and Bhasu Bihar as a single «complex of sites», as CHAKRABARTI does, *op. cit.* p. 100.
21. For the excavation results, see N. AHMED, " Excavation : Bashu Viahara ", *Bangladesh Archaeology,* vol. 1 (1979), p. 33-67. A summary of the excavation results can also be found in D.K. CHAKRABARTI, *Ancient Bangladesh: A Study of the Archaeological Sources*, Oxford University Press, Delhi, 1992.
22. CHAKRABARTI, *op. cit.*, p. 106-107.
23. See J.-F. SALLES, S.M. ALAM, M.-F. BOUSSAC, J.-Y. BREUIL, Ch. OBERLIN, H. RAHMAN, " Dates 14C de Mahasthan, Bangladesh ", in J. EVIN, C. OBERLIN, J.-P. DAUGAS & J.-F. SALLES eds., *Actes du 3ème congrès international " Archéologie et 14C ", Lyon, 6-10 avril 1998. Revue d'Archéométrie* Suppl. 1999, et Soc. Préhist. Fr. Mémoire n°26, p. 319-325 ; and J.-F. SALLES, " Excavations at Mahasthan: New evidence of contacts with the Ganges Valley ", paper presented at the Third International Conference on Bengal Art, Rajshahi, 1999.
24. For example, there appears to have been more formal administrative activity such as land-transfers in the south of Bengal, as assessed through the study of 5-13th century grants written on copper plates; see B. MORRISON, *Political Centers and Cultural Regions in Early Bengal*, University of Arizona, Tucson, 1970. He notes that because the majority of these grants came from the region of Sylhet-Comilla-Chittagong and the Dacca-Faridpur subregions, "we might infer that these two contiguous areas were ruled more continuously by administrations capable and willing to make land grants and that political and religions conditions which would encourage the reallocation of property prevailed in these subregions for a number of centuries." p. 56.

It might be suggested that, deprived of strong political leaders, people living in the Mahasthangarh region may have turned away from the urban core and concentrated its resources on the maintenance of monasteries located outside of the city. The presence of monastic sites shows that the region did retain some level of importance in this era, and remained on the traditional itineraries of pilgrimage for long-distance travelers such as Hiuen Tsang. In *fig. 3*, the proposed settlement pattern for this region shows a principal corridor of activity between the fortified city and the region to the northwest, in which was located an active Buddhist monastic zone represented by the Bihar/Bhasu Bihar sites.

Two hypotheses about the configuration of the hinterland population can be proposed for the Gupta period:

I. The majority of the population was housed within the city walls, and made the daily journey to fields and periodic visits to any religious establishments outside the walls. The city's leaders (in the form of a local chief or council) would have had direct control of various kinds of habitation, manufacturing and marketing within the city, as well as direct control of surplus labor for the construction of the fortification walls.

II. The city was a symbolic edifice containing mostly administrative and bureaucratic structures, and the majority of the inhabitants lived in small settlements or individual households in the dispersed hinterlands of the city. Households and small villages maintained economic and social relationships with non-urban institutions such as religious establishments, perhaps through *corvée* labor or payment in kind (*i.e.* food, bricks). The city leaders would have tapped into this pool of labor and resources for the construction of the first fortification walls of the city on top of the earthen ramparts already established on the east side to protect the population center from the seasonal floods of the Karatoya.

Although the Gupta period may have witnessed something of an economic decline, the archaeological record of the Mahasthangarh region shows that for the first time, there was substantial activity outside of the fortification walls that resulted in the creation of structures.

Phase III: Pala (8-12th centuries A.D.)

Within the walls of Mahasthangarh, the current excavations have shown a resurgence of a relatively rich material culture during the Pala period. In the hinterlands of the urban core, there are numerous archaeological remains that correspond, or are likely to correspond, to this period. The distribution of different site types around Mahasthangarh indicate that the area to the northwest of the city continued to be an area with substantial Buddhist activity, while the area to the south contained habitations and semi-autonomous communities.

The zone to the northwest, already identified as a thriving zone of Buddhist activity in the preceding Gupta period, appears to have received additional and substantial architectural investment in the Pala era. The excavations at Bhasu Bihar show that in this period, two substantial monasteries and a shrine were constructed, the latter decorated with terracotta plaques. These monasteries are in the form of a closed rectilinear building with an interior courtyard; on all four sides, the interior of the building is lined with small rooms that have a

single opening facing the courtyard. This striking architectural design is paralleled in at least two cases by other preserved sites to the northwest of Mahasthangarh: Lohana and the westernmost of the two mound groups known as Kanjerhari-Dhap.

Interestingly, these mounds are located between Mahasthangarh and Bhasu Bihar, and may represent an attempt by those who sponsored the construction to bring Buddhist activities closer to the city while still maintaining a symbolic distance between the economic life of the urban core and the contemplative life of a purely religious domain. Within the walls of Mahasthangarh, there are reports of religious structures dating to this period as well. Ahmed's volume on the site indicates that in 1961, a temple of the 8th century A.D. was excavated near the gateway on the southwest interior corner of the fortifications.[25] A pair of temples, of the 8th century and of the 11th century, were recovered from the site of Bairagi Bhita, also on the interior of the fortifications but located in the northeastern portion of the site.[26]

To the south and southwest of Mahasthangarh, the types of structures found outside the walls of this era are very different from the monasteries found to the northwest. The most distinctive type of architecture is a kind of artificial hill such as that seen at Gokul Medh, about 1.5 kilometers south of the southern rampart of Mahasthangarh. This curious construction was made of a lattice of brick cells solidly filled in with earth, producing a densely-packed mound measuring nearly 100 meters long by 50 meters wide, with the long axis running east-west.[27] The uppermost cells were cleared out in the excavations of 1934-36; excavations also produced terracotta plaques that are reported to date to the 6-7th century A.D. although the construction was greatly enlarged in the subsequent Pala period.[28]

The region immediately around Gokul Medh is surrounded by the vestiges of mounds with structural remains and numerous artificial ponds (tanks).[29] Two other very large mounds to the southwest of Mahasthangarh illustrate a similar pattern of a large structure accompanied by habitation mounds and artificial ponds. One is the site of Godai Bari, located 1.5 kilometers west of the southwest corner of the Mahasthangarh fortifications. This site, excavated by the Directorate of Archaeology in 1998, consists of a complex of solidly-packed brick structures and walls; the combined effect of these constructions is a steep-sided mound in which the long axis runs east-west.[30] In the immediate vicinity of Godai Bari there are numerous other mounds that

25. AHMED, *op. cit.*, p. 40-42.
26. AHMED, *op. cit.*, p. 25-27.
27. See AHMED, *op. cit.*, p. 50-51; his observations are repeated, with a plan of the structure, in CHAKRABARTI, *op. cit.*, p 97-100.
28. AHMED, *op. cit.*, p. 50 notes that the first structure was of a cruciform plan, which makes one immediately think of the Buddhist cruciform constructions at Mainamati (*i.e.* Rupban Mura, 9-11th centuries A.D., and the first phase of the central shrine at Salban Vihara dated to the 8th century A.D.); see A.K.M. SHAMSUL ALAM, *Mainamati*, Department of Archaeology and Museums, Dhaka. A similar cruciform construction is also found at the central shrine of Paharpur, dated to the 8th century A.D.; see K.N. DIKSHIT, *Excavations at Paharpur*, Memoirs of the Archaeological Survey of India vol. 55, Delhi, 1938. At Gokul Medh today, there is no trace of this underlying cruciform structure. Two factors suggest the possibility that the first shrine was not of the Gupta period. First, all of the other cruciform structures in Bangladesh are dated to the 8th century or later; secondly, there is a possibility that Gupta art conventions may have been used in the early Pala period as well.
29. AHMED, *op. cit.*, p. 50, reports that a smaller mound to the east of Gokul Medh "seems to be the remains of an ancient temple" of this period; this mound is probably the one referred to in the present day as "Dhopar Ghat", although there is no sure indication of what kind of structure may be present within the mound. He refers to the site as "Netai Dhopanir Pat" while Ali and Bhattacharjee call a site in the same location "Netai Dhopanir Dhap", *op. cit.*, p. 10.
30. I am grateful to the Directorate of Archaeology for the opportunity to see the excavations in progress at Godai Bari last year, and for the hospitality extended to me during my visit.

have structural remains, including the very large site of Kanai Dhap to the southwest, now reduced to about 3 hectares in size and covered to a considerable extent by a modern village.

Another site in which this pattern is repeated is the site of Chota Tangra, located 4 kilometers west-southwest of the fortification walls of Mahasthangarh.[31] This very large mound currently measures 80 x 40 meters and seven meters high, and has its long axis running east-west. The mound appears to have been the central focus of numerous other constructions in the vicinity, including two large rectilinear artificial ponds and several mounds 0.5 to 1.5 hectares in size. Although unexcavated, there is some indication that it dates to the Pala period, as there is a report that terracotta plaques and stone sculptures of the 8-9th century were found but later thrown into a nearby pond.[32] At Gokul Medh, Godai Bari and Chota Tangra, the archaeological groups of monumental structures, habitation mounds and artificial ponds appear to represent semi-autonomous communities. Monumental hills and other civic architecture such as ponds, serving as the focus of communal social activity outside the walls of Mahasthangarh, may have been the result of a local desire to express autonomy from the central city of Mahasthangarh. The construction of these very labor-intensive structures in outlying areas also suggests the presence of authorities in these smaller population centers who had the resources to sponsor such projects.[33]

Throughout the western portion of greater Bengal, the Pala period was one of growth and prosperity, as indicated by the Pala endowments of religious monasteries (such as Paharpur) and civic improvements (such as the large artificial pond at Dhibor in western Bangladesh). At Mahasthangarh, this period of prosperity was manifested in development of a complex urban hinterland with a distinct division into different zones: to the northwest, a religious area with monasteries, and to the south, a zone of semi-autonomous communities such as the one around Gokul Medh.

Period IV: Sena period (12th century A.D.)

There are few archaeological remains that can be securely dated to the Sena period from this era, although the introduction of Hinduism by the Senas permits the identification of some structural elements that probably date to this period. Hindu votive and structural elements appear at the uppermost levels of Gokul Medh, where a square construction was recovered and identified as a temple. In this structure was found a small piece of gold leaf with a relief of a recumbent bull, an attribute usually associated in Hinduism with the god Shiva.[34] This temple also has architectural elements that are not seen in earlier levels, such as a pavement on the west side made of bricks laid on edge in a grid pattern.

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31. This site is also referred to as Mangalnather by Sen and Ahmed, but there is some confusion about the name Mangalnather since it is also applied to the site of Mangalkot by Ali and Bhattacharjee. Ali and Bhattacharjee refer to the "gigantic mound" at Chota Tengra village as Bhagur Dhap. The mention of Mangalnather by Ahmed and Sen likewise refers to a size of mound that matches Chota Tangra.
32. According to AHMED, *op. cit.*, p. 58.
33. The development could, for example, be compared to the expansion of Chaco culture in the American Southwest in the 12th century A.D. The "Chaco phenomenon" refers to the construction of numerous large structures known as great houses in small communities throughout the region in a relatively short period of time (see, for example, L. SEBASTIAN, *The Chaco Anasazi: Sociopolitical Evolution in the Prehistoric Southwest*, Cambridge, 1992.
34. AHMED, *op. cit.*, p 50-51.

A similar pattern of bricks is also seen among the uppermost layers of Godai Bari, where the pavement is found on the eastern side of the structure. At Chota Tangra, the uppermost levels have already been razed by the local villagers, so that it will be difficult now to recapture any information about the later construction phases. However, if the monumental constructions at these sites were the focus of community activity in the Pala period, it is not surprising that their function as central places would have been reutilized by the builders of Hindu temples as they introduced new forms of worship to the population.

Period V: Early Islamic (13-16th centuries A.D.)

This period is one whose chronological parameters are not yet well-understood at the central site of Mahasthangarh. However, there are a considerable number of archaeological vestiges dating to this period throughout northwestern Bangladesh. The general impression is that in this period there were numerous local chiefs who made use of the economic revitalization brought along with Islam to construct small fortified sites and trading centers. At Mahasthangarh, this revitalization made use of an urban center that had been in place for centuries. On the south-eastern interior of the site, religious investments had already been made in this specific area throughout the site's history.[35] During the Islamic period, this area was utilized by the practitioners of Islam for the public display of a new faith. The exact date of the earliest construction is unknown and the mosque that now stands there is dated by an inscription to 1719 A.D.; earlier structures in the vicinity include a possible tomb dated to the 17th century through paleography, and a pre-Mughal mosque that is located about 300 meters to the north-west at Mankalir Kunda mound.[36]

The distribution of Islamic structures indicates that construction activities and population were concentrated on the southern side of the urban core in the Islamic period. The archaeological vestiges on the exterior of the fortification walls also indicate a concentration of population on this southern side as well. To the immediate south of the fortification wall, there are numerous artificial ponds that are cut through dense deposits of ceramics that appear to be late-period types. And to the far southwest of the urban core there are sites such as Salban Rajar bari, as well as Jogir Bhavan where there are a number of Hindu temples. In sum, the population of the greater Mahasthangarh region was drawn into a wider region south of the urban core in the Islamic period. The semi-autonomous communities of the Pala period maintained their status as settlements, but the regions to the north of Mahasthangarh with their Buddhist attachments were abandoned.

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35. In addition to the temple mentioned above, there was a black stone Nandi (bull associated with Shiva) recovered from the area, and Cunningham reported seeing a battered Jain image here as well; see AHMED, *op. cit.*, p. 39-40.
36. ALI and BHATTACHARJEE, *op. cit.*, cite P.C. Sen's recovery of an unfinished Jain image from this site as well.
37. For a comparative example, see WELCH, *op. cit.*, p. 147.

Summary of survey results

Pending a more thorough investigation of Mahasthangarh's hinterlands, the observations made in this paper must be regarded as extremely tentative. The excavations at the Eastern Rampart indicate that there were significant changes over time in the prosperity of the site's inhabitants. As judged by the types of artifacts found in these excavations, there were also shifts in the contacts sustained between Mahasthangarh and other regions in Bengal, the Indian subcontinent and Southeast Asia. It is to be expected that these shifts, seen archaeologically in the urban core, would also have had an impact on the relationship between the city and its immediate hinterland.

It is certain that the hinterlands of the site show patterns of different types of sites. Starting in the Gupta period and continuing into the Pala period, there appears to have been a distinction maintained between different parts of the urban hinterland: specialized religious sites such as Buddhist monasteries were found to the north-west of the urban core, and satellite settlements with monumental architecture were found to the south. When new ideologies and political rulers gained favor in the region, the population centers at the southern edge of the site were the location of Hindu shrines and, soon afterwards, Islamic monuments.

Future research

Given the rich archaeological potential of the Mahasthangarh region, and the body of comparative data now available from the excavations at the Eastern Rampart, there is a sound scientific basis for a comprehensive program to examine the relationship between the city and its hinterland over time. Population is also increasing in this region and will continue to grow, especially with the expanded commercial activities of the nearby city of Bogra now that the new Bangabondhu Bridge is open. The growth of population provides an additional impetus to examine these outlying sites, especially small sites which are in danger of disappearing.

Ideally, a systematic research program in this area should consist of three stages. First, a new archaeological map of the region to update Sen's 1929 map would facilitate a more precise identification of the location of archaeological remains and their current condition. The use of modern technology such as a laser theodolite would enable the map to display many small features in addition to large mounds. A second profitable phase of investigation would be a systematic investigation of a sample of these small sites to see if the ancient landscape was densely populated with small villages and households, or whether pre-modern population tended to be concentrated only in the area of very large sites. A project of systematic small test excavations or auger tests in a sample of these smaller sites would yield valuable information about the human-made changes to the landscape over time.[37]

A third important aspect of any future project in the hinterlands of Mahasthangarh should include an open excavation of a portion of one of these hinterland sites to capture information about changes over time in a single settlement. Such an excavation would provide important comparative data to the Eastern Rampart excavations, enabling us to balance our currently urban-based understanding of Mahasthangarh's growth and development with the point of view of the hinterland. This balanced view would add greatly to the understanding of how Mahasthangarh grew and flourished over time.